

WHAT IS CLAIMED IS:

- 1 1. A system for building a quantitative information database, said system
2 comprising:
3 a computer program for deriving quantitative information from subjects' medical
4 images,
5 a computer receiving database information, said database information comprising
6 said subjects' medical images, obtained during routine medical or dental care, or said
7 quantitative information derived from said subjects' medical images, and subjects'
8 personal information, said personal information being selected from the group consisting
9 of demographic information, geographic information, information on risk factors
10 associated with one or more diseases, disease-related factors, and disease-preventive
11 factors, and
12 a central database collecting data from at least two sources, storing the
13 quantitative information, and associating the quantitative information with the subjects'
14 personal information.
- 1 2. The system according to claim 1, wherein said computer further receives
2 subjects' treatment information comprising information regarding treatment that subjects
3 are receiving for said one or more diseases.
- 1 3. The system according to claim 1, wherein said central database is installed
2 on said computer.
- 1 4. The system according to claim 1, wherein said computer comprises a
2 central system server.
- 1 5. The system according to claim 1, wherein said computer comprises a
2 plurality of connected computers.
- 1 6. The system according to claim 2, wherein said central database and said
2 treatment information provide data on efficacy of one or more treatments or drugs being
3 administered to said subjects.

1 7. The system according to claim 2, wherein said central database and said
2 treatment information provide data on market penetration of one or more drugs being
3 administered to said subjects.

1 8. The system according to claim 1, wherein said computer receives said
2 database information via a medium selected from the group consisting of a network, e-
3 mail, a data storage medium, a scanner with text recognition software, and manual input.

1 9. The system according to claim 8, wherein when the medium is a network,
2 the network is selected from the group consisting of the Internet, a local area network,
3 and a network that is accessed via a remote connection.

1 10. The system according to claim 1, further comprising a plurality of
2 information collection terminals, selected from the group consisting of a personal
3 computer, a notebook computer, an embedded computer, a handheld computer, a personal
4 digital assistant, and a pocket PC, for providing said database information.

1 11. The system according to claim 1, further comprising user access to said
2 central database via a medium selected from the group consisting of the Internet, a local
3 area network, a network accessed via a remote connection, e-mail, and a data storage
4 medium.

1 12. The system according to claim 1, wherein the medical images are selected
2 from the group consisting of medical x-rays, dental x-rays, computed radiographic
3 images, digital radiographic images, ultrasound images, single x-ray absorptiometry
4 scans, dual x-ray absorptiometry scans, CT scans, MRI scans, PET scans, and SPECT
5 scans.

1 13. The system according to claim 1, wherein the computer further comprises
2 a medical imaging apparatus for providing said medical images.

1 14. The system according to claim 13, wherein the medical imaging apparatus
2 comprises a system selected from the group consisting of an x-ray apparatus, a computed

3 radiography apparatus, a digital radiography apparatus, an ultrasound apparatus, a single
4 x-ray absorptiometry apparatus, a dual x-ray absorptiometry apparatus, a CT scanner, an
5 MRI apparatus, a PET scan apparatus, and a SPECT scan apparatus.

1 15. The system according to claim 14, wherein when the medical imaging
2 apparatus is an x-ray apparatus, said x-ray apparatus is a dental x-ray apparatus.

1 16. The system according to claim 14, wherein when the medical imaging
2 apparatus is an x-ray apparatus, said x-ray apparatus acquires images of skeletal areas
3 selected from the group consisting of the hip joint, one or more vertebral bodies, forearm,
4 upper arm, hand, wrist, lower leg, thigh, foot, ankle, knee joint, elbow joint, shoulder
5 joint, ribs, cranium, mandible, or maxilla.

1 17. The system according to claim 1, wherein the quantitative information is
2 selected from the group consisting of bone mass, bone mineral density, and bone structure
3 information.

1 18. The system according to claim 2, wherein the central database further
2 stores derived data points, calculated from the quantitative information and associated
3 with the subjects' personal and treatment information.

1 19. The system according to claim 18, wherein the derived data points are
2 selected from the group consisting of subjects' bone mass changes over time, subjects'
3 bone density changes over time, and subjects' bone structure changes over time.

1 20. The system according to claim 19, wherein the derived data points indicate
2 changes in dermatologic condition of said subjects over time.

1 21. The system according to claim 19, wherein the derived data points indicate
2 changes in ophthalmic condition of said subjects over time.

1 22. The system according to claim 2, wherein subjects' medical images, and
2 personal and treatment information are transferred in digital form to said computer.

1 23. The system according to claim 1, wherein when said subjects' personal
2 information comprises demographic information, the demographic information comprises
3 information selected from the group consisting of age, gender, race, address, area code,
4 zip or postal code, city, county, state or province, and country.

1 24. The system according to claim 1, wherein said subjects' personal
2 information comprises physical characteristic information.

1 25. The system according to claim 24, wherein the physical characteristic
2 information comprises information selected from the group consisting of height and
3 weight.

1 26. The system according to claim 1, wherein when said subjects' personal
2 information comprises information on risk factors, the one or more diseases are bone-
3 related diseases.

1 27. The system according to claim 26, wherein the bone-related disease is
2 selected from the group consisting of osteoporosis, osteoarthritis, rheumatoid arthritis,
3 and metabolic bone disease.

1 28. The system according to claim 2, wherein subjects' treatment information
2 comprises drug and dosage information.

1 29. A method of building a quantitative information database, said method
2 comprising:
3 receiving database information from at least two sources, said database
4 information comprising subjects' medical images, obtained during routine medical or
5 dental care, or quantitative information derived from said subjects' medical images, and
6 subjects' personal information, said personal information being selected from the group
7 consisting of demographic information, geographic information, information on risk
8 factors associated with one or more diseases, disease-related factors, and disease-
9 preventive factors,

10 wherein said receiving comprises either receiving said subjects' medical images
11 and deriving quantitative information from said subjects' medical images, or receiving
12 said quantitative information derived from said subjects' medical images,
13 storing the quantitative information; and
14 associating the quantitative information with the subjects' personal information in
15 said database.

1 30. The method according to claim 29, further comprising receiving subjects'
2 treatment information comprising information regarding treatment that subjects are
3 receiving for said one or more diseases.

1 31. The method according to claim 30, further comprising providing data on
2 efficacy of one or more treatments or drugs being administered to said subjects.

1 32. The method according to claim 30, further comprising providing data on
2 market penetration of one or more drugs being administered to said subjects.

1 33. The method according to claim 29, wherein the medical images are
2 selected from the group consisting of medical x-rays, dental x-rays, computed
3 radiographic images, digital radiographic images, ultrasound images, single x-ray
4 absorptiometry scans, dual x-ray absorptiometry scans, CT scans, MRI scans, PET scans,
5 and SPECT scans.

1 34. The method according to claim 29, wherein the quantitative information is
2 selected from the group consisting of bone mass, bone mineral density, and bone structure
3 information.

1 35. The method according to claim 29, further comprising storing derived data
2 points, calculated from the quantitative information and associated with the subjects'
3 personal and treatment information.

1 36. The method according to claim 35, wherein the derived data points are
2 selected from the group consisting of subjects' bone mass changes over time, subjects'
3 bone density changes over time, and subjects' bone structure changes over time.

1 37. The method according to claim 35, wherein the derived data points
2 indicate changes in dermatologic condition of said subjects over time.

1 38. The method according to claim 35, wherein the derived data points
2 indicate changes in ophthalmic condition of said subjects over time.

1 39. A system for building a quantitative information database, said system
2 comprising:
3 a computer program for deriving quantitative information from subjects' medical
4 tests,
5 a computer receiving database information, said database information comprising
6 said subjects' medical tests, obtained during routine medical or dental care, or said
7 quantitative information derived from said subjects' medical tests, and subjects' personal
8 information, said personal information being selected from the group consisting of
9 demographic information, geographic information, information on risk factors associated
10 with one or more diseases, disease-related factors, and disease-preventive factors, and
11 a central database collecting data from at least two sources, storing the
12 quantitative information, and associating the quantitative information with the subjects'
13 personal information.

1 40. The system according to claim 39, wherein said computer further receives
2 subjects' treatment information comprising information regarding treatment that subjects
3 are receiving for said one or more diseases.

1 41. The system according to claim 39, wherein said central database is
2 installed on said computer.

1 42. The system according to claim 39, wherein said computer comprises a
2 central system server.

1 43. The system according to claim 39, wherein said computer comprises a
2 plurality of connected computers.

1 44. The system according to claim 40, wherein said central database and said
2 treatment information provide data on efficacy of one or more treatments or drugs being
3 administered to said subjects.

1 45. The system according to claim 40, wherein said central database and said
2 treatment information provide data on market penetration of one or more drugs being
3 administered to said subjects.

1 46. The system according to claim 39, wherein said computer receives said
2 database information via a medium selected from the group consisting of a network, e-
3 mail, a data storage medium, a scanner with text recognition software, and manual input.

1 47. The system according to claim 46, wherein when the medium is a network,
2 the network is selected from the group consisting of the Internet, a local area network,
3 and a network that is accessed via a remote connection.

1 48. The system according to claim 39, further comprising a plurality of
2 information collection terminals, selected from the group consisting of a personal
3 computer, a notebook computer, an embedded computer, a handheld computer, a personal
4 digital assistant, and a pocket PC, for providing said database information.

1 49. The system according to claim 39, further comprising user access to said
2 central database via a medium selected from the group consisting of the Internet, a local
3 area network, a network accessed via a remote connection, e-mail, and a data storage
4 medium.

1 50. The system according to claim 39, wherein said medical tests are selected
2 from the group consisting of liver tests, renal tests, tests for diabetes, EKGs, EEGs, heart
3 disease tests, blood pressure tests, cholesterol tests, and tests for enzyme changes.

1 51. The system according to claim 39, wherein the central database further
2 stores derived data points, calculated from the quantitative information and associated
3 with the subjects' personal and treatment information.

1 52. The system according to claim 51, wherein the derived data points are
2 selected from the group consisting of cholesterol changes over time, renal function
3 changes over time, liver function changes over time, heart condition changes over time,
4 blood sugar level changes over time, blood pressure changes over time, and enzyme
5 changes over time.

1 53. The system according to claim 39, wherein subjects' medical test results,
2 and personal and treatment information are transferred in digital form to said computer.

1 54. The system according to claim 39, wherein subjects' personal information
2 comprises demographic information.

1 55. The system according to claim 54, wherein the demographic information
2 comprises information selected from the group consisting of age, gender, race, address,
3 area code, zip or postal code, city, county, state or province, and country.

1 56. The system according to claim 39, wherein subjects' personal information
2 comprises physical characteristic information.

1 57. The system according to claim 56, wherein the physical characteristic
2 information comprises information selected from the group consisting of height and
3 weight.

1 58. The system according to claim 39, wherein subjects' personal information
2 comprises risk factors for a predetermined group of diseases.

1 59. The system according to claim 58, wherein the predetermined group of
2 diseases are selected from the group consisting of liver related diseases, kidney related
3 diseases, and heart related diseases.

1 60. The system according to claim 39, wherein subjects' treatment information
2 comprises drug and dosage information.

1 61. A method of building a quantitative information database, said method
2 comprising:

3 receiving database information from at least two sources, said database
4 information comprising subjects' medical tests, obtained during routine medical or dental
5 care, or quantitative information derived from said subjects' medical tests, and subjects'
6 personal information, said personal information being selected from the group consisting
7 of demographic information, geographic information, information on risk factors
8 associated with one or more diseases, disease-related factors, and disease-preventive
9 factors,

10 wherein said receiving comprises either receiving said subjects' medical tests and
11 deriving quantitative information from said subjects' medical tests, or receiving said
12 quantitative information derived from said subjects' medical tests,

13 storing the quantitative information; and

14 associating the quantitative information with the subjects' personal information in
15 said database.

1 62. The method according to claim 61, further comprising receiving subjects'
2 treatment information comprising information regarding treatment that subjects are
3 receiving for said one or more diseases.

1 63. The method according to claim 62, further comprising providing data on
2 efficacy of one or more treatments or drugs being administered to said subjects.

1 64. The method according to claim 62, further comprising providing data on
2 market penetration of one or more drugs being administered to said subjects.

1 65. The method according to claim 61, wherein the medical tests are selected
2 from the group consisting of liver tests, renal tests, tests for diabetes, EKGs, EEGs, heart
3 disease tests, blood pressure tests, cholesterol tests, and tests for enzyme changes.

1 66. The method according to claim 61, further comprising storing derived data
2 points, calculated from the quantitative information and associated with the subjects'
3 personal and treatment information.

1 67. The method according to claim 66, wherein the derived data points are
2 selected from the group consisting of cholesterol changes over time, renal function
3 changes over time, liver function changes over time, heart condition changes over time,
4 blood sugar level changes over time, blood pressure changes over time, and enzyme
5 changes over time.

1 68. A system for building a quantitative information database, said system
2 comprising:
3 a computer program for deriving quantitative information from subjects' standard
4 x-ray images,
5 a computer receiving database information, said database information comprising
6 said subjects' standard x-ray images or said quantitative information derived from said
7 subjects' standard x-ray images, and personal information, said personal information
8 being selected from the group consisting of demographic information, geographic
9 information, information on risk factors associated with one or more diseases, disease-
10 related factors, and disease-preventive factors, and
11 a central database collecting data from at least two sources, storing the
12 quantitative information, and associating the quantitative information with the subjects'
13 personal information.

1 69. The system according to claim 68, wherein said computer further receives
2 subjects' treatment information comprising information regarding treatment that subjects
3 are receiving for said one or more diseases.

1 70. The system according to claim 68, wherein said central database is
2 installed on said computer.

1 71. The system according to claim 68, wherein said computer comprises a
2 central system server.

1 72. The system according to claim 68, wherein said computer comprises a
2 plurality of connected computers.

1 73. The system according to claim 69, wherein said central database and said
2 treatment information provide data on efficacy of one or more treatments or drugs being
3 administered to said subjects.

1 74. The system according to claim 69, wherein said central database and said
2 treatment information provide data on market penetration of one or more drugs being
3 administered to said subjects.

1 75. The system according to claim 68, wherein said computer receives said
2 database information via a medium selected from the group consisting of a network, e-
3 mail, a data storage medium, a scanner with text recognition software, and manual input.

1 76. The system according to claim 75, wherein when the medium is a network,
2 the network is selected from the group consisting of the Internet, a local area network,
3 and a network that is accessed via a remote connection.

1 77. The system according to claim 68, further comprising a plurality of
2 information collection terminals, selected from the group consisting of a personal
3 computer, a notebook computer, an embedded computer, a handheld computer, a personal
4 digital assistant, and a pocket PC, for providing said database information.

1 78. The system according to claim 68, further comprising user access to said
2 central database via a medium selected from the group consisting of the Internet, a local
3 area network, a network accessed via a remote connection, e-mail, and a data storage
4 medium.

1 79. The system according to claim 68, wherein the standard x-ray images are
2 selected from the group consisting of dental x-ray images, and medical x-ray images.

1 80. The system according to claim 68, wherein said standard x-ray images
2 include x-ray images of skeletal areas selected from the group consisting of the hip joint,
3 one or more vertebral bodies, forearm, upper arm, hand, wrist, lower leg, thigh, foot,
4 ankle, knee joint, elbow joint, shoulder joint, ribs, cranium, mandible, or maxilla.

1 81. The system according to claim 68, wherein the quantitative information is
2 selected from the group consisting of bone mass, bone mineral density, and bone structure
3 information.

1 82. The system according to claim 69, wherein the central database further
2 stores derived data points, calculated from the quantitative information and associated
3 with the subjects' personal and treatment information.

1 83. The system according to claim 82, wherein the derived data points are
2 selected from the group consisting of subjects' bone mass changes over time, subjects'
3 bone density changes over time, and subjects' bone structure changes over time.

1 84. The system according to claim 69, wherein subjects' medical data, and
2 personal and treatment information are transferred in digital form to said separate
3 computer.

1 85. The system according to claim 68, wherein, when the personal information
2 comprises demographic information, the demographic information comprises information
3 selected from the group consisting of age, gender, race, address, area code, zip or postal
4 code, city, county, state or province, and country.

1 86. The system according to claim 68, wherein, when the personal information
2 comprises physical characteristic information, the physical characteristic information
3 comprises information selected from the group consisting of height and weight.

1 87. The system according to claim 68, wherein, when the personal information
2 comprises risk factors for a predetermined group of diseases, the predetermined group of
3 diseases are bone-related diseases.

1 88. The system according to claim 87, wherein the bone-related diseases are
2 selected from the group consisting of osteoporosis, osteoarthritis, rheumatoid arthritis,
3 and metabolic bone disease.

1 89. The system according to claim 69, wherein subjects' treatment information
2 comprises drug and dosage information.

1 90. A method of building a quantitative information database, said method
2 comprising:
3 receiving database information from at least two sources, said database
4 information comprising subjects' standard x-ray images, or quantitative information
5 derived from said subjects' standard x-ray images, and subjects' personal information,
6 said personal information being selected from the group consisting of demographic
7 information, geographic information, information on risk factors associated with one or
8 more diseases, disease-related factors, and disease-preventive factors,
9 wherein said receiving comprises receiving said subjects' standard x-ray images
10 and deriving said quantitative information from said subjects' standard x-ray images, or
11 receiving said quantitative information derived from said subjects' standard x-ray images,
12 storing the quantitative information; and
13 associating the quantitative information with the subjects' personal information in
14 said database.

1 91. The method according to claim 90, further comprising receiving subjects'
2 treatment information comprising information regarding treatment that subjects are
3 receiving for said one or more diseases.

1 92. The method according to claim 91, further comprising providing data on
2 efficacy of one or more treatments or drugs being administered to said subjects.

93. The method according to claim 91, further comprising providing data on market penetration of one or more drugs being administered to said subjects.

94. The method according to claim 90, wherein the standard x-ray images are selected from the group consisting of medical x-rays and dental x-rays.

95. The method according to claim 90, wherein the quantitative information is selected from the group consisting of bone mass, bone mineral density, and bone structure information.

96. The method according to claim 90, further comprising storing derived data points, calculated from the quantitative information and associated with the subjects' personal and treatment information.

97. The method according to claim 96, wherein the derived data points are selected from the group consisting of subjects' bone mass changes over time, subjects' bone density changes over time, and subjects' bone structure changes over time.

98. A method for determining a screening rate for diseases in a system, said system comprising:

a computer receiving database information comprising subjects' medical images or quantitative information derived from said medical images, and personal information; and

a central database storing the quantitative information, associating the quantitative information with geographic regions and with the subjects' personal information, wherein the method comprises:

correlating the geographic regions to census information to produce data in terms of a number of data points per unit of population in one or more of said geographic regions; and

correlating the number of data points to a number of screening tests performed per geographic region per unit of time for a predetermined disease or a group of diseases to produce said screening rate.

1 99. The method according to claim 98, further comprising receiving subjects'
2 treatment information comprising information regarding treatment that subjects are
3 receiving for said one or more diseases.

1 100. The method according to claim 99, further comprising providing data on
2 efficacy of one or more treatments or drugs being administered to said subjects.

1 101. The method according to claim 99, further comprising providing data on
2 market penetration of one or more drugs being administered to said subjects.

1 102. The method according to claim 98, wherein the medical images are
2 selected from the group consisting of medical x-rays, dental x-rays, computed
3 radiographic images, digital radiographic images, ultrasound images, single x-ray
4 absorptiometry scans, dual x-ray absorptiometry scans, CT scans, MRI scans, PET scans,
5 and SPECT scans.

1 103. The method according to claim 98, wherein the quantitative information is
2 selected from the group consisting of bone mass, bone mineral density, and bone structure
3 information.

1 104. The method according to claim 98, further comprising storing derived data
2 points, calculated from the quantitative information and associated with the subjects'
3 personal and treatment information.

1 105. The method according to claim 104, wherein the derived data points are
2 selected from the group consisting of subjects' bone mass changes over time, subjects'
3 bone density changes over time, and subjects' bone structure changes over time.

1 106. The method according to claim 104, wherein the derived data points
2 indicate changes in dermatologic condition of said subjects over time.

1 107. The method according to claim 104, wherein the derived data points
2 indicate changes in ophthalmic condition of said subjects over time.

108. A method for determining a screening rate for diseases in a system, said system comprising:

a computer receiving database information comprising subjects' medical tests, or quantitative data derived from said medical tests, and personal information, and

a central database storing the quantitative information, associating the quantitative information with geographic regions and with the subjects' personal information, wherein the method comprises:

correlating the geographic regions to census information to produce data in terms of a number of data points per unit of population in one or more of said geographic regions; and

correlating the number of data points to a number of screening tests performed per geographic region per unit of time for a predetermined disease or a group of diseases to produce said screening rate.

109. The method according to claim 108, further comprising receiving subjects' treatment information comprising information regarding treatment that subjects are receiving for said one or more diseases.

110. The method according to claim 109, further comprising providing data on efficacy of one or more treatments or drugs being administered to said subjects.

111. The method according to claim 109, further comprising providing data on market penetration of one or more drugs being administered to said subjects.

112. The method according to claim 108, wherein the medical tests are selected from the group consisting of liver tests, renal tests, tests for diabetes, EKGs, EEGs, heart disease tests, blood pressure tests, cholesterol tests, and tests for enzyme changes.

113. The method according to claim 108, further comprising storing derived data points, calculated from the quantitative information and associated with the subjects' personal and treatment information.

1 114. The method according to claim 113, wherein the derived data points are
2 selected from the group consisting of cholesterol changes over time, renal function
3 changes over time, liver function changes over time, heart condition changes over time,
4 blood sugar level changes over time, blood pressure changes over time, and enzyme
5 changes over time.

1 115. A method for producing market penetration data of different drugs in
2 geographical regions, said system comprising:
3 a computer receiving database information comprising subjects' medical images
4 or quantitative data derived from medical images, personal information, and treatment
5 information, said treatment information comprising identifying information for one or
6 more drugs taken by the subjects for one or more disorders; and
7 a central database storing the medical images or the quantitative data derived from
8 medical images, associated with the subjects' personal and treatment information,
9 wherein said method comprises:
10 correlating respective drugs to geographic information;
11 obtaining numbers of subjects on each of the respective drugs in each geographic
12 region identified by the geographic information; and
13 correlating the numbers of subjects to a reference, wherein the reference is
14 selected from the group consisting of census information, and a total number of subjects
15 on each of the respective drugs.

1 116. The method according to claim 115, wherein the stored database
2 information is time-stamped.

1 117. The method according to claim 116, wherein the geographic information
2 comprises information selected from the group consisting of address, area code, zip or
3 postal code, city, county, state or province, and country of the subjects.

1 118. The method according to claim 117, wherein the method further comprises
2 normalizing the market penetration data according to the subjects' personal information.

1 119. The method according to claim 118, wherein the personal information is
2 selected from the group consisting of demographic information, physical characteristic
3 information of said subjects, and risk factors for a predetermined group of diseases.

1 120. The system according to claim 115, wherein the medical images are
2 selected from the group consisting of medical x-rays, dental x-rays, computed
3 radiographic images, digital radiographic images, ultrasound images, single x-ray
4 absorptiometry scans, dual x-ray absorptiometry scans, CT scans, MRI scans, PET scans,
5 and SPECT scans.

1 121. A method for producing market penetration data of different drugs in
2 geographical regions, said system comprising:

3 a computer receiving database information comprising subjects' medical tests or
4 quantitative data derived from medical tests, personal information, and treatment
5 information, said treatment information comprising identifying information for one or
6 more drugs taken by the subjects for one or more disorders; and

7 a central database storing the medical tests or the quantitative data derived from
8 the medical tests, associated with the subjects' personal and treatment information,

9 wherein said method comprises:

10 correlating respective drugs to geographic information;

11 obtaining numbers of subjects on each of the respective drugs in each geographic
12 region identified by the geographic information; and

13 correlating the numbers of subjects to a reference, wherein the reference is
14 selected from the group consisting of census information, and a total number of subjects
15 on each of the respective drugs.

1 122. The method according to claim 121, wherein the stored database
2 information is time-stamped.

1 123. The method according to claim 122, wherein the geographic information
2 comprises information selected from the group consisting of address, area code, zip or
3 postal code, city, county, state or province, and country of the subjects.

1 124. The method according to claim 123, wherein the method further comprises
2 normalizing the market penetration data according to the subjects' personal information.

1 125. The method according to claim 124, wherein the personal information is
2 selected from the group consisting of demographic information, physical characteristic
3 information of said subjects, and risk factors for a predetermined group of diseases.

1 126. The method according to claim 121, wherein the medical tests are selected
2 from the group consisting of liver tests, renal tests, tests for diabetes, EKGs, EEGs, heart
3 disease tests, blood pressure tests, cholesterol tests, and tests for enzyme changes.

1 127. A method for producing market penetration data of different drugs in
2 certain regions by a system, said system comprising:
3 a computer receiving database information comprising subjects' medical images
4 or quantitative data derived from medical images, personal information, and treatment
5 information, said treatment information comprising identifying information for one or
6 more drugs taken by the subjects for one or more disorders; and
7 a central database storing the quantitative data derived from medical images or the
8 quantitative data derived from medical images, associated with the subjects' personal and
9 treatment information,
10 wherein said method comprises, for the one or more disorders:
11 correlating respective drugs, administered for the one or more disorders, to
12 geographic information;
13 obtaining the consumption amount of each of the respective drugs in each region
14 identified by the geographic information; and
15 correlating that consumption amount of each of the respective drugs to the sum of
16 the consumption amount of all of the respective drugs.

1 128. The method according to claim 127, wherein the stored database
2 information is time-stamped.

129. The method according to claim 128, wherein the geographic information comprises information selected from the group consisting of address, area code, zip or postal code, city, county, state or province, and country of the subjects.

130. The method according to claim 129, wherein the method further comprises normalizing the market penetration data according to the subjects' personal information.

131. The method according to claim 130, wherein the personal information is selected from the group consisting of demographic information, physical characteristic information of said subjects, and risk factors for a predetermined group of diseases.

132. The system according to claim 127, wherein the medical images are selected from the group consisting of medical x-rays, dental x-rays, computed radiographic images, digital radiographic images, ultrasound images, single x-ray absorptiometry scans, dual x-ray absorptiometry scans, CT scans, MRI scans, PET scans, and SPECT scans.

133. A method for producing market penetration data of different drugs in certain regions by a system, said system comprising:

a computer receiving database information comprising subjects' medical tests or quantitative data derived from medical tests, personal information, and treatment information, said treatment information comprising identifying information for one or more drugs taken by the subjects for one or more disorders; and

a central database storing the quantitative data derived from medical tests or the quantitative data derived from medical tests, associated with the subjects' personal and treatment information,

wherein said method comprises, for the one or more disorders:

correlating respective drugs, administered for the one or more disorders, to geographic information;

obtaining the consumption amount of each of the respective drugs in each region identified by the geographic information; and

15 correlating that consumption amount of each of the respective drugs to the sum of
16 the consumption amount of all of the respective drugs.

1 134. The method according to claim 133, wherein the stored database
2 information is time-stamped.

1 135. The method according to claim 134, wherein the geographic information
2 comprises information selected from the group consisting of address, area code, zip or
3 postal code, city, county, state or province, and country of the subjects.

1 136. The method according to claim 135, wherein the method further comprises
2 normalizing the market penetration data according to the subjects' personal information.

1 137. The method according to claim 136, wherein the personal information is
2 selected from the group consisting of demographic information, physical characteristic
3 information of said subjects, and risk factors for a predetermined group of diseases.

1 138. The method according to claim 133, wherein the medical tests are selected
2 from the group consisting of liver tests, renal tests, tests for diabetes, EKGs, EEGs, heart
3 disease tests, blood pressure tests, cholesterol tests, and tests for enzyme changes.

1 139. A method for comparing efficacy of different drugs by a system, said
2 system comprising:

3 a computer receiving database information comprising subjects' medical images
4 or quantitative data derived from medical images, personal information, and treatment
5 information, said treatment information comprising identifying information for one or
6 more drugs taken by the subjects for one or more disorders; and

7 a central database storing the quantitative data derived from medical images or the
8 quantitative data derived from medical images, associated with the subjects' personal and
9 treatment information,

10 wherein the method comprises:

11 grouping subjects into groups by the drugs taken; and

12 obtaining derived data points by comparing quantitative information from
13 subsequent medical images with respect to that of a baseline medical image taken of each
14 subject in each of said groups.

1 140. The method according to claim 139, wherein the method further comprises
2 normalizing the derived data points by subjects' personal information.

1 141. The method according to claim 140, wherein the personal information is
2 selected from the group consisting of demographic information, physical characteristic
3 information, and risk factors for a predetermined group of diseases.

1 142. The system according to claim 139, wherein the medical images are
2 selected from the group consisting of medical x-rays, dental x-rays, computed
3 radiographic images, digital radiographic images, ultrasound images, single x-ray
4 absorptiometry scans, dual x-ray absorptiometry scans, CT scans, MRI scans, PET scans,
5 and SPECT scans.

1 143. The method according to claim 139, wherein the derived data points are
2 selected from the group consisting of bone mass changes over time, bone mineral density
3 changes over time, and bone structure change over time.

1 144. A method for comparing efficacy of different drugs by a system, said
2 system comprising:

3 a computer receiving database information comprising subjects' medical tests or
4 quantitative data derived from medical tests, personal information, and treatment
5 information, said treatment information comprising identifying information for one or
6 more drugs taken by the subjects for one or more disorders; and

7 a central database storing the quantitative data derived from medical tests or the
8 quantitative data derived from medical tests, associated with the subjects' personal and
9 treatment information,

10 wherein the method comprises:

11 grouping subjects into groups by the drugs taken; and

12 obtaining derived data points by comparing quantitative information from
13 subsequent medical tests with respect to that of a baseline medical test performed on each
14 subject in each of said groups.

1 145. The method according to claim 144, wherein the method further comprises
2 normalizing the derived data points by subjects' personal information.

1 146. The method according to claim 145, wherein the personal information is
2 selected from the group consisting of demographic information, physical characteristic
3 information, and risk factors for a predetermined group of diseases.

1 147. The method according to claim 144, wherein the medical tests are selected
2 from the group consisting of liver tests, renal tests, tests for diabetes, EKGs, EEGs, heart
3 disease tests, blood pressure tests, cholesterol tests, and tests for enzyme changes.

1 148. The method according to claim 144, wherein the derived data points are
2 selected from the group consisting of bone mass changes over time, bone mineral density
3 changes over time, and bone structure change over time.

1 149. A system for providing quantitative information to a central database for
2 tracking treatment efficacy, said system comprising a plurality of information collection
3 terminals receiving data selected from the group consisting of medical images, dental
4 images, dermatological tests, ophthalmological tests, and laboratory tests, said plurality of
5 information collection terminals also receiving subjects' treatment information, wherein
6 said treatment information provides data regarding said treatment efficacy.

1 150. A system for providing quantitative information to a central database for
2 tracking market penetration of drugs, said system comprising a plurality of information
3 collection terminals receiving data selected from the group consisting of medical images,
4 dental images, dermatological tests, ophthalmological tests, and laboratory tests, said
5 plurality of information collection terminals also receiving subjects' personal
6 information, said subjects' personal information including geographic information, said
7 information collection terminals also receiving subjects' drug administration information,

8 wherein said drug administration information, together with said geographic information,
9 in said central database, provides data regarding said market penetration.

1 151. A system as claimed in claim 1, wherein the at least two sources are
2 selected from the group consisting of healthcare provider offices and dental provider
3 offices.

1 152. A method as claimed in claim 29, wherein the at least two sources are
2 selected from the group consisting of healthcare provider offices and dental provider
3 offices.

1 153. A system as claimed in claim 39, wherein the at least two sources are
2 selected from the group consisting of healthcare provider offices and dental provider
3 offices.

1 154. A method as claimed in claim 61, wherein the at least two sources are
2 selected from the group consisting of healthcare provider offices and dental provider
3 offices.

1 155. A system as claimed in claim 68, wherein the at least two sources are
2 selected from the group consisting of healthcare provider offices and dental provider
3 offices.

1 156. A method as claimed in claim 90, wherein the at least two sources are
2 selected from the group consisting of healthcare provider offices and dental provider
3 offices.

1 157. A system for providing assurance of quality of subjects' medical images,
2 said system comprising:
3 a computer receiving either said subjects' medical images or said quantitative
4 information derived from said subjects' medical images from a remotely located site; and
5 a computer program for performing quality checks on the subjects' medical
6 images, wherein the medical images are selected from the group consisting of x-ray,

7 ultrasound, single x-ray absorptiometry, dual x-ray absorptiometry, CT, MRI,
8 radionuclide, SPECT scan, PET scan or data derived from analysis of medical
9 photographic techniques, laser enhanced imaging, and various biomicroscopy techniques,
10 and

11 wherein the quality checks are selected from the group consisting of assessments
12 of image quality, assessments of image resolution, and assessments of image contrast.

1 158. A system as claimed in claim 157, wherein said quality checks are fully
2 automated.

1 159. A system as claimed in claim 157, wherein said quality checks are carried
2 out with human interaction.

1 160. A system as claimed in claim 157, wherein said quality checks are carried
2 out on a sample of the subjects' medical images.

1 161. A system as claimed in claim 157, wherein said quality checks are carried
2 out on a portion of selected ones of the subjects' medical images.

1 162. A system as claimed in claim 157, wherein said quality checks are fully
2 automated.